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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,013

04/17/2006

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EXAMINER

NIESZ, JASON KAROL

ART UNIT

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4147

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,013	Applicant(s) KLEBE ET AL.	
	Examiner JASON K. NIESZ	Art Unit 4147	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/17/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 04/17/2006 was considered by the examiner. The two Japanese abstract documents in the IDS were not considered because copies were not submitted.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kesten et al. (DE 10107895 A1).
5. Another patent in the same family as Kesten entered the US national stage as application 10/471,926, and published as US 2008/0016884 on June 6, 2007. This application will be used as a translation of Kesten. References to Kesten will refer to the US application unless otherwise stated.
6. In Re claim 1 Kesten discloses a method for high-pressure filling of a pressure vessel with a gas or gas-mixture (Page 1, paragraph 2) in which the pressure vessel is cooled and filled (Page 1, paragraph 9) with at least one gas at a temperature above the

boiling temperature (Page 1, paragraph 2) of the gas, is closed in the cooled state and a pressure is produced in the filled and closed pressure vessel by warming (Page 1, paragraph 9).

7. In Re claim 2 Kesten discloses an internal tank pressure of 1000 to over 1200 bar achieved using the above method.

8. In Re claim 3 Kesten discloses the pressure tank warming up to the ambient temperature (Page 2, paragraph 27).

9. In Re claim 4 Kesten discloses the use of hydrogen as the fill gas (Page 2, paragraph 22). The examiner notes that the boiling temperature of hydrogen at STP is approximately -253 C.

10. In Re claim 5 Kesten discloses the use of liquid nitrogen at a temperature of -196 C to cool the pressure vessel (Page 1, paragraph 11).

11. In Re claim 6 Kesten discloses the use of liquid nitrogen at a temperature of -196 C to cool the pressure vessel (Page 1, paragraph 11). Kesten further discloses the use of a liquid nitrogen heat exchanger to cool the fill gas to -196 C (Page 2, paragraph 27). The examiner notes that the filling would take place at a constant temperature because the fill gas and the pressure vessel are both cooled to the same temperature.

12. In Re claim 7 with reference to Figure 1 Kesten discloses a cooling bath (2) for use in cooling the pressure vessel during filling process (Page 2, paragraph 23).

13. In Re claims 9 and 10 with reference to Figure 1 Kesten discloses the use of a coolant bath (2) to cool the pressure vessel during filling process (Page 2, paragraph 23) and a compressed-gas source (12) not in the cooling bath. The cooling bath is

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disclosed as liquid nitrogen (Page 1, paragraph 11), which at -196 C results in the pressure vessel being substantially more than 50 degrees C colder than the compressed-gas source.

14. In Re claim 11 Kesten discloses the method whereby the pressure vessel is filled with a gas mixture by filling with a previously produced gas mixture (Page 3, claim 1)

15. In Re claims 12, 13 and 14 Kesten discloses the use of a compressed-gas source at 100 bar (Page 1, paragraph 11).

16. In Re claims 15 and 16 Kesten discloses the use of liquid nitrogen at a temperature of -196 C to cool the pressure vessel (Page 1, paragraph 11). Kesten further discloses the use of a liquid nitrogen heat exchanger to cool the fill gas to -196 C (Page 2, paragraph 27).

17. In Re claim 18 Kesten discloses all the limitations of claim 1; functional statements of intended use have been considered and deemed not to impose any limitations on the claim distinguishable over the Kesten method which is further capable of filling airbag gas generators if one would so desire.

18. In Re claims 19 and 20 Kesten discloses the use of hydrogen as the fill gas (Page 2, paragraph 22). The examiner notes that the boiling temperature of hydrogen at STP is approximately -253 C. Also, functional statements of intended use have been considered and deemed not to impose any limitations on the claim distinguishable over the Kesten method which is further capable of filling airbag gas generators if one would so desire.

19. In Re claim 21 with reference to Figure 1 Kesten discloses the use of an apparatus comprising at least one compressed-gas source (12)(Page 2, paragraph 22), at least one pressure vessel (5)(Page 2, paragraph 21) with a cooling device (2) (Page 2, paragraph 22), a connecting line (11), and at least one valve (16)(Page 2, paragraph 27), for filling the pressure vessel with at least one gas or gas mixture without mechanical compensation (Page 2, paragraph 22). Also, functional statements of intended use have been considered and deemed not to impose any limitations on the claim distinguishable over the Kesten method which is further capable of filling airbag gas generators if one would so desire.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kesten in view of Bastian (US Patent 5,900,538).

22. In Re claim 8 Kesten discloses all the limitations but doesn't disclose a manometric determination of the filling quantity. Bastian discloses manometric measurement of pressure (Column 12, line 13). Because the pressure in the pressure vessel is held constant during filling, a pressure measurement can be used to calculate quantity. Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made, to use a manometric measurement to determine fill quantity, in order to prevent overflow of the pressure vessel.

23. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kesten in view of Lak et al. (US Patent 5,644,920).

24. In Re claim 17 Kesten discloses all the limitations but doesn't disclose the method characterized in that a pressurized refrigerant is used for the cooling, or the temperature is set, controlled or regulated during cooling by the action of pressure. Lak discloses a method whereby the pressure of a cooling bath is lowered in order to depress the boiling point to control the temperature of the cooling bath. (Column 2, lines 62-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use pressure to control the temperature of the coolant bath in Kesten, in order to precisely control the parameters of the filling process.

Double Patenting

25. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

26. Claims 1, 3, 5, 6, 8, 11, 12 and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 5, 6, 8, 11, 12 and 15 of copending Application No. 10/583,131. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application discloses all the limitations of the instant application and further discloses the option to use a cryogenically liquefied gas during filling..

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

27. Claims 1, 4, 5, 6, 15, 16, 18, 19 and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 4, 6 and 7 of copending Application No. 10/471,926 in view of claims 2 and 15 of copending Application No. 10/583,131. Application 10/471,926 discloses all the limitations of the listed claims but doesn't disclose warming the container to increase pressure. Application 10/583/131 discloses warming the container through compensation to room temperature in order to increase the pressure. Therefore, it would have been obvious to one of ordinary skill in the art to increase the pressure in the vessels from Application 10/471,926 through warming, in order to achieve the pressure level required by the chosen application. Also, functional statements of intended use have been considered and deemed not to impose any limitations on the

claim distinguishable over the Application 10/471,926 method which is further capable of filling airbag gas generators if one would so desire.

This is a provisional obviousness-type double patenting rejection.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bird (US Patent 5,022,442) discloses a method for filling a high pressure container comprising subsequent filling of each component of a desired gas mixture. Welz (US Patent 6,726,241 B2) discloses a high pressure vessel for use in an airbag system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. NIESZ whose telephone number is (571)270-3920. The examiner can normally be reached on mon-fri 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571) 272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason K Niesz
Examiner
Art Unit 4147

/Ninh H. Nguyen/
Primary Examiner, Art Unit 3745